

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P558948

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-93-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558948
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-1-LD4-1STD-40-UNV-93-86-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 648.0 lumens
Efficiency: N/A
Efficacy: 78.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

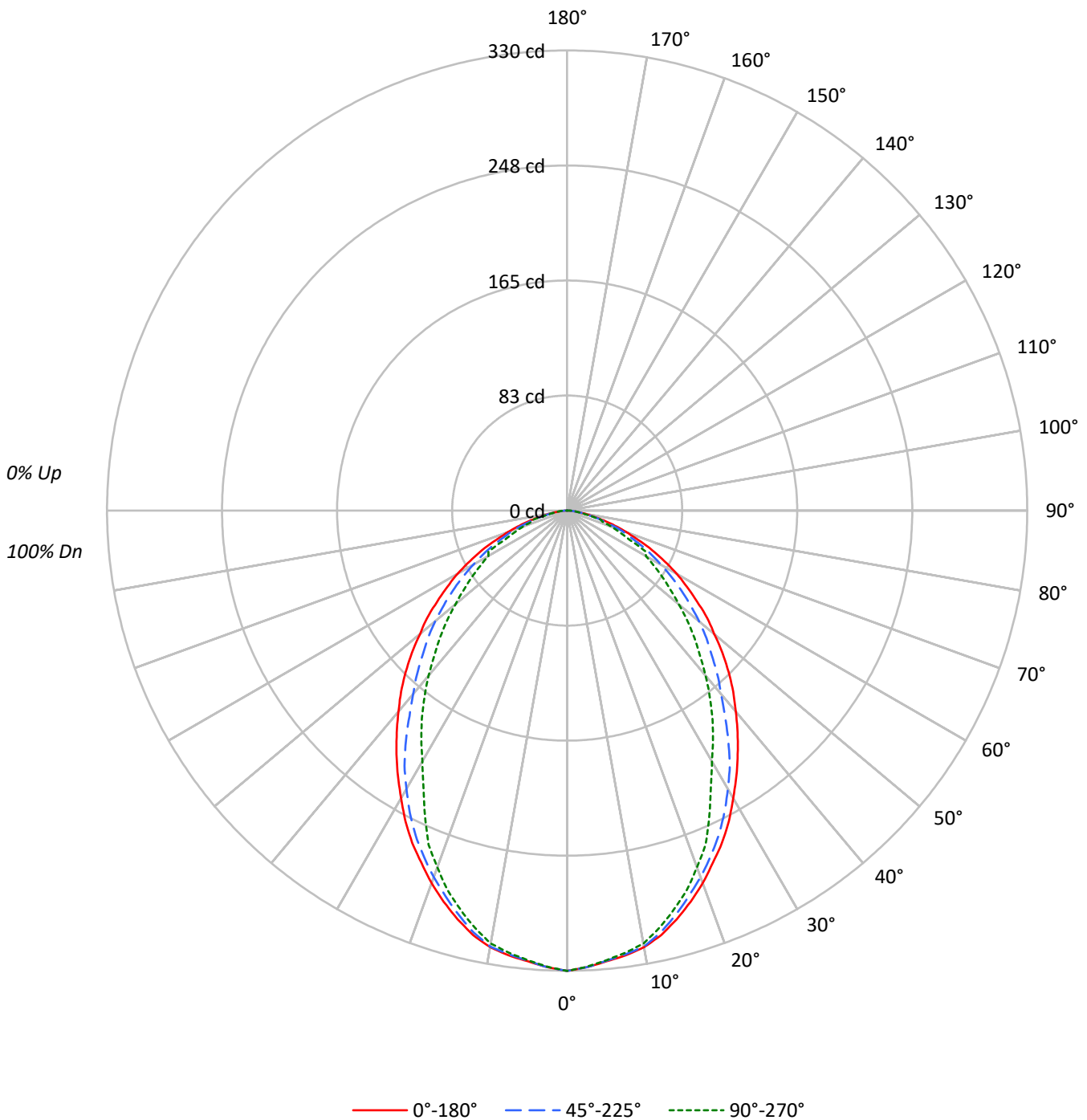
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3553	3553	3553
5°	3505	3501	3497
10°	3475	3470	3445
15°	3381	3346	3300
20°	3257	3204	3117
25°	3122	3055	2865
30°	2959	2865	2580
35°	2803	2648	2386
40°	2643	2413	2171
45°	2492	2230	1964
50°	2308	2070	1752
55°	2134	1877	1569
60°	1955	1675	1406
65°	1719	1467	1243
70°	1416	1284	1057
75°	1127	986	1031
80°	756	707	663
85°	469	568	655

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2492 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.7	4.7
10°-20°	84.3	13.0
20°-30°	116.7	18.0
30°-40°	124.5	19.2
40°-50°	113.6	17.5
50°-60°	89.0	13.7
60°-70°	58.0	8.9
70°-80°	25.7	4.0
80°-90°	5.5	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	231.8	35.8
0°-40°	356.3	55.0
0°-60°	558.8	86.2
0°-90°	648.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	648.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	330	330	330	330	330	
5°	324	324	324	324	324	31
15°	303	303	300	297	296	85
25°	263	261	257	248	241	121
35°	213	212	202	186	182	133
45°	164	160	146	134	129	126
55°	114	110	100	88	84	102
65°	68	64	58	59	49	67
75°	27	25	24	22	25	29
85°	4	4	5	5	5	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	330.1	330.1	330.1	330.1	330.1
2.5°	327.8	327.8	327.8	327.4	327.4
5°	324.4	324.0	324.0	323.6	323.6
7.5°	321.7	321.3	320.9	320.5	319.8
10°	317.9	317.9	317.5	315.6	315.2
12.5°	311.8	311.4	309.9	307.2	306.4
15°	303.4	303.4	300.3	297.3	296.1
17.5°	294.2	293.8	290.0	287.0	285.4
20°	284.3	283.5	279.7	274.8	272.1
22.5°	273.2	273.2	268.6	262.2	259.5
25°	262.9	261.4	257.2	248.0	241.2
27.5°	251.1	248.8	244.2	231.2	223.2
30°	238.1	237.0	230.5	213.7	207.6
32.5°	225.9	224.0	217.1	199.6	194.6
35°	213.3	211.8	201.5	186.2	181.6
37.5°	200.7	198.8	185.8	173.6	167.9
40°	188.1	185.8	171.7	160.7	154.5
42.5°	176.3	173.2	159.5	147.7	140.8
45°	163.7	160.3	146.5	134.3	129.0
47.5°	151.1	148.1	135.5	122.9	116.8
50°	137.8	135.1	123.6	111.0	104.6
52.5°	126.7	122.5	111.4	98.8	93.5
55°	113.7	110.3	100.0	88.1	83.6
57.5°	101.9	98.5	88.9	77.8	74.0
60°	90.8	85.9	77.8	68.3	65.3
62.5°	78.6	74.8	67.9	59.9	63.7
65°	67.5	63.7	57.6	58.8	48.8
67.5°	55.3	53.4	48.1	42.7	41.2
70°	45.0	42.7	40.8	35.1	33.6
72.5°	35.9	33.6	30.9	27.9	26.7
75°	27.1	25.2	23.7	22.5	24.8
77.5°	18.7	17.9	16.8	15.6	15.3
80°	12.2	11.8	11.4	11.1	10.7
82.5°	7.3	7.3	7.3	7.3	7.3
85°	3.8	4.2	4.6	5.0	5.3
87.5°	2.3	2.3	2.7	3.1	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)